

**AMENDMENTS TO THE DRAWINGS:**

The attached sheets of drawings include changes to Figs. 1, 2, 3 and 4. The sheet of Figs. 1, 2, 3 and 4 replace the original sheets of Figs. 1, 2, 3 and 4, respectively.

New drawings Figs. 6 and 7 are submitted herewith.

Attachment(s):Replacement Sheets (Figs. 1, 2, 3, 4)

Annotated Sheets Showing Changes (Figs. 1, 2, 3, 4)

Sheets of New Drawings (Figs. 6 and 7)



[NEW]

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Technology Center 2600

Coding, using a coding device at a transmission side, each of the at least one message using a respective orthogonal function so as to form a transmission signal, each respective orthogonal function being an approximation of a respective Hermite function

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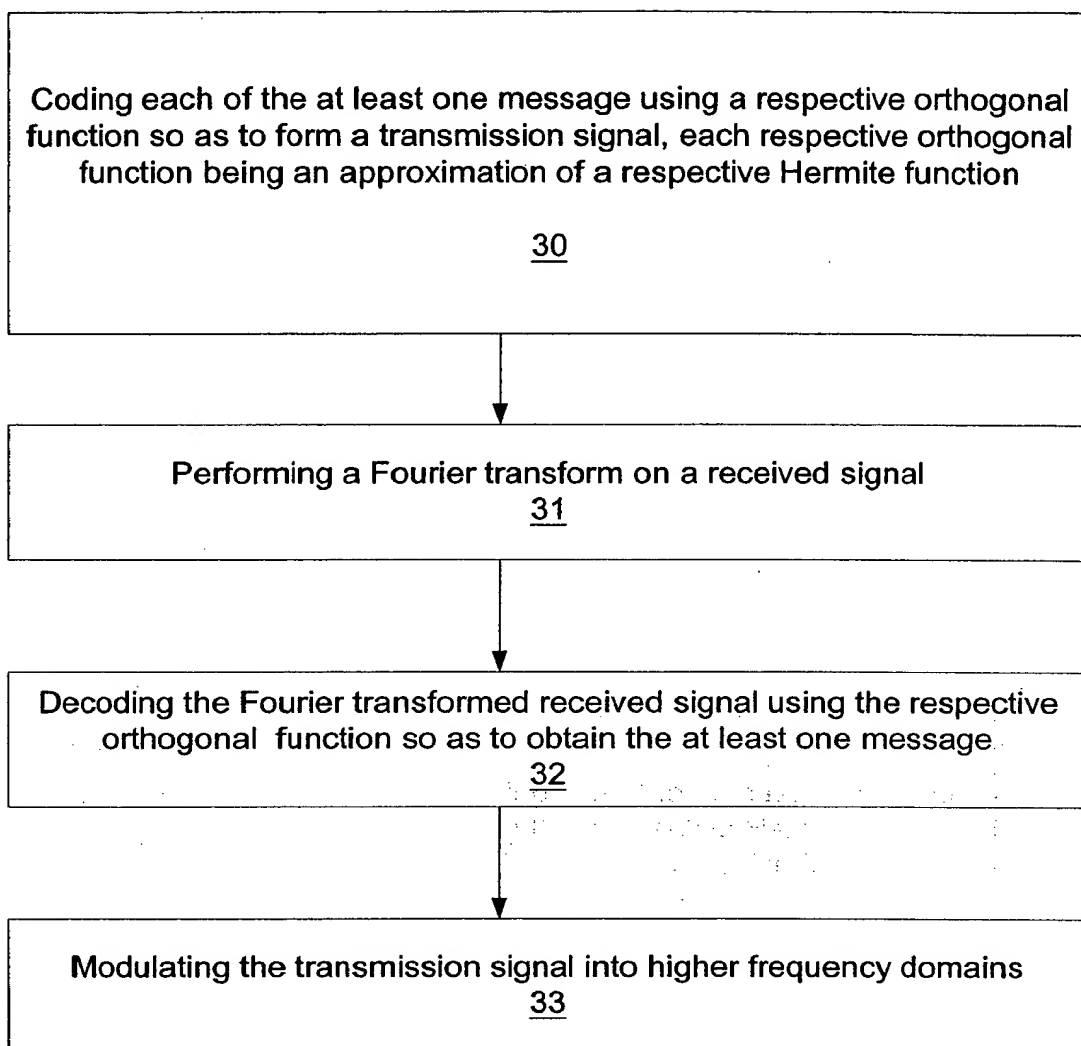
Recovering, using a demodulation device at a receiving side, the at least one message from a received signal via a decoding using the respective Hermite function, the demodulation device including a Fourier-transform device for performing a Fourier transform on the received signal before the decoding, and including a respective first decoder unit corresponding to each of the at least one message, each respective first decoder unit including a respective first multiplier, a respective first integrator and a respective first discriminator connected in series, wherein each respective first decoder unit is for decoding the received signal in a time domain and wherein the demodulation device further includes a respective second decoder unit associated with each respective first decoder unit, each respective second decoder unit being for decoding the received signal in a frequency domain and including a respective second multiplier, a respective second integrator and a respective second discriminator connected in series

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FIG. 7



[NEW]



**FIG. 6**

# [REPLACEMENT]

## 1 Circuit Arrangement

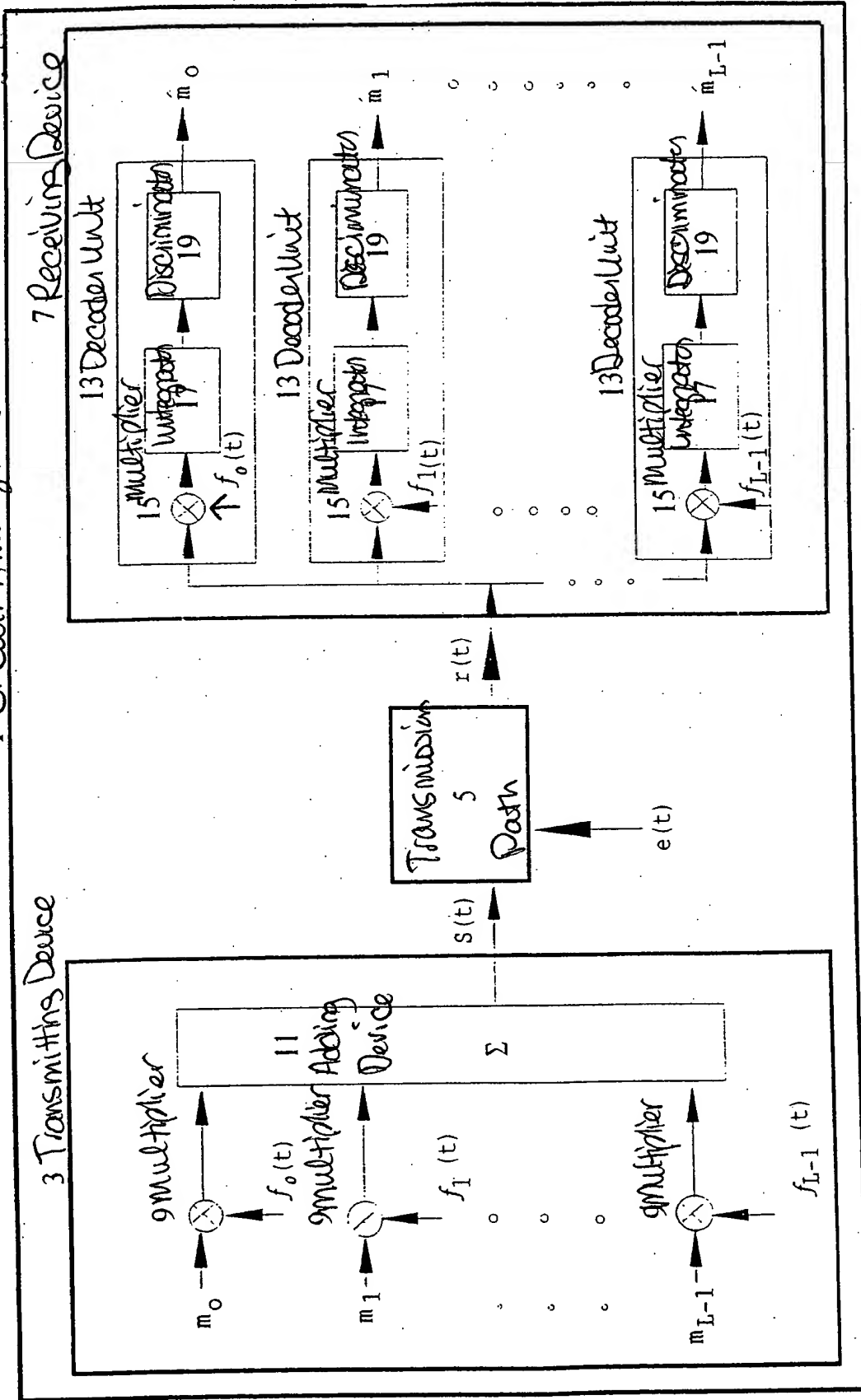
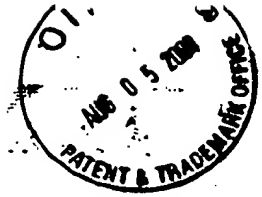
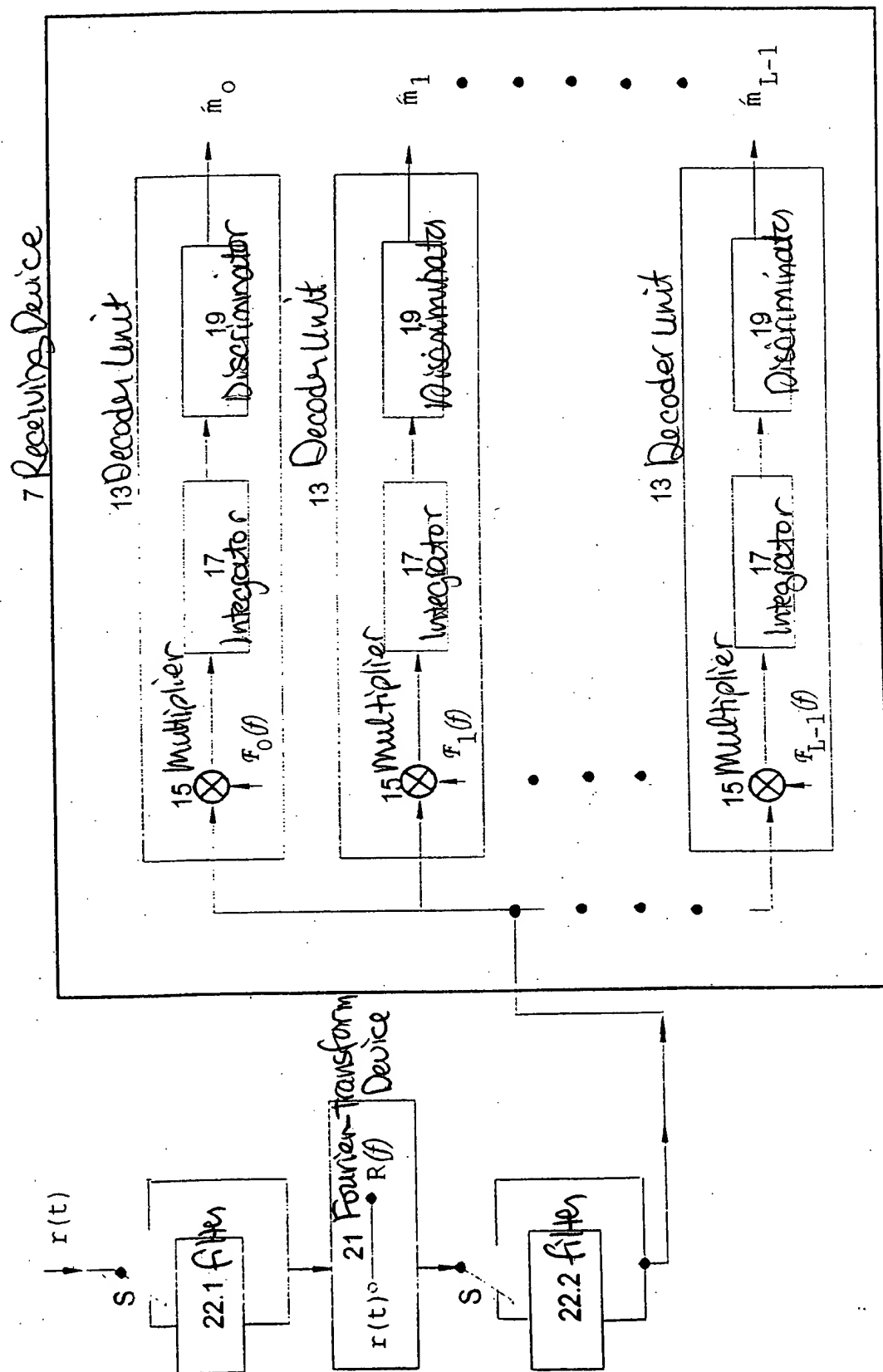


Fig. 1



[REPLACEMENT]





[REPLACEMENT]

# 7 Receiving Device

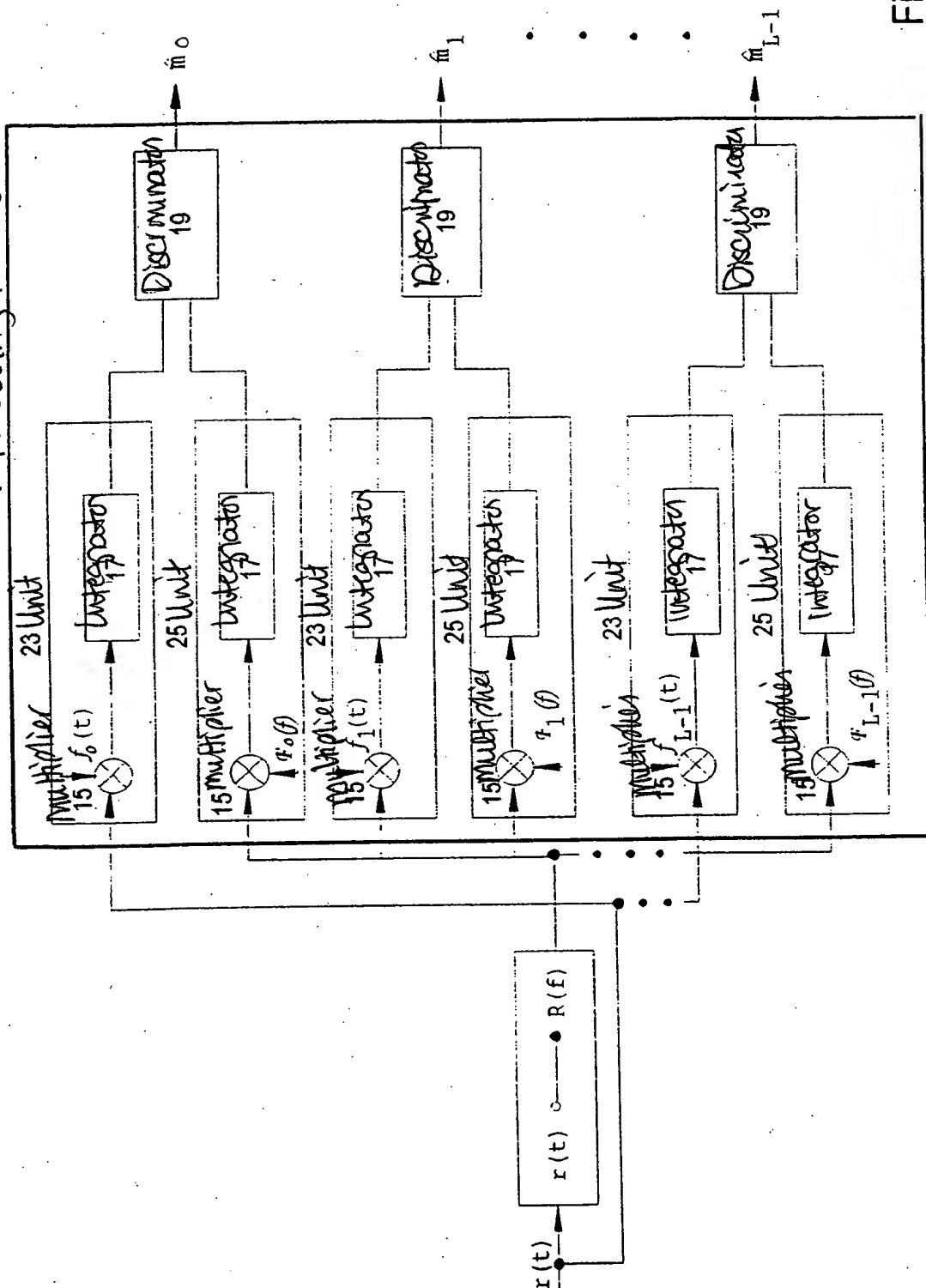


Fig.3

[REPLACEMENT]

7 Receiving Device

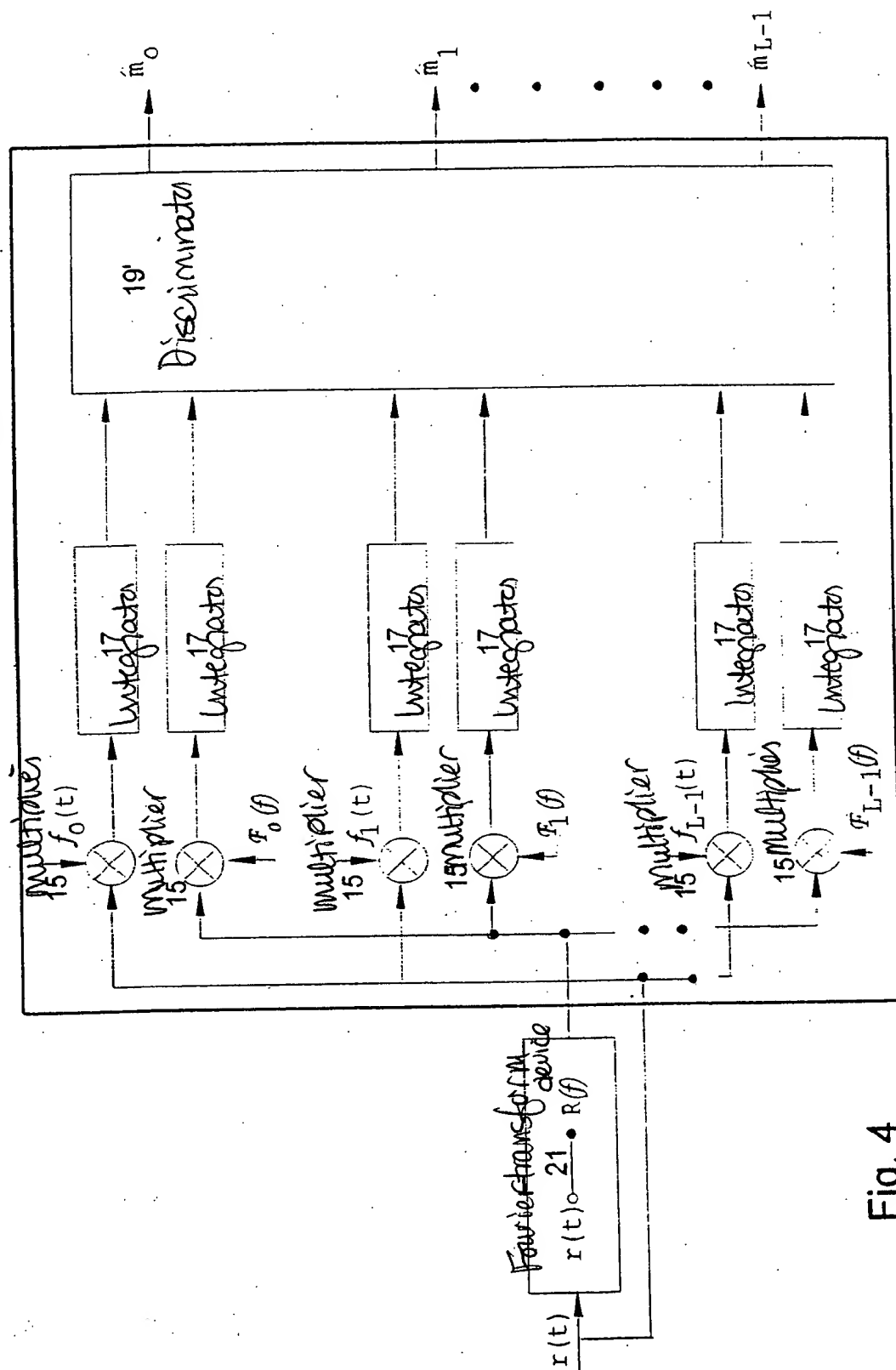


Fig. 4



[REPLACEMENT]

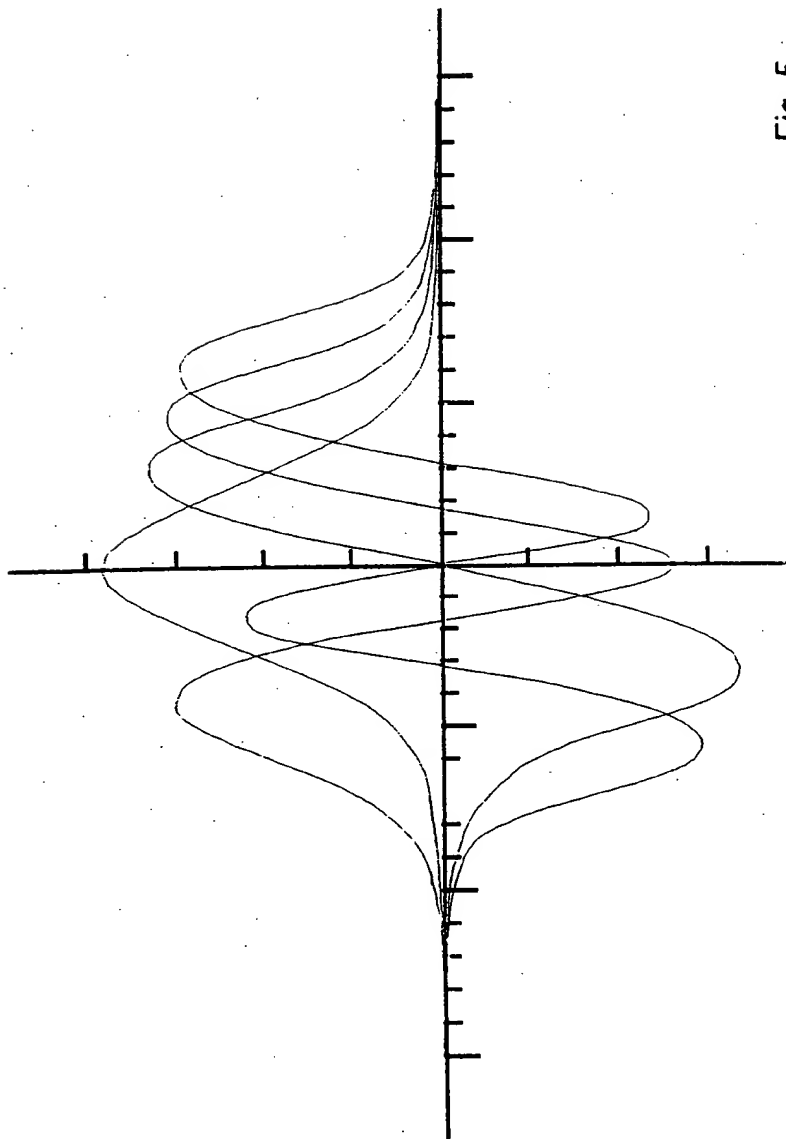


Fig. 5



[ANNOTATED]

1 Circuit Arrangement

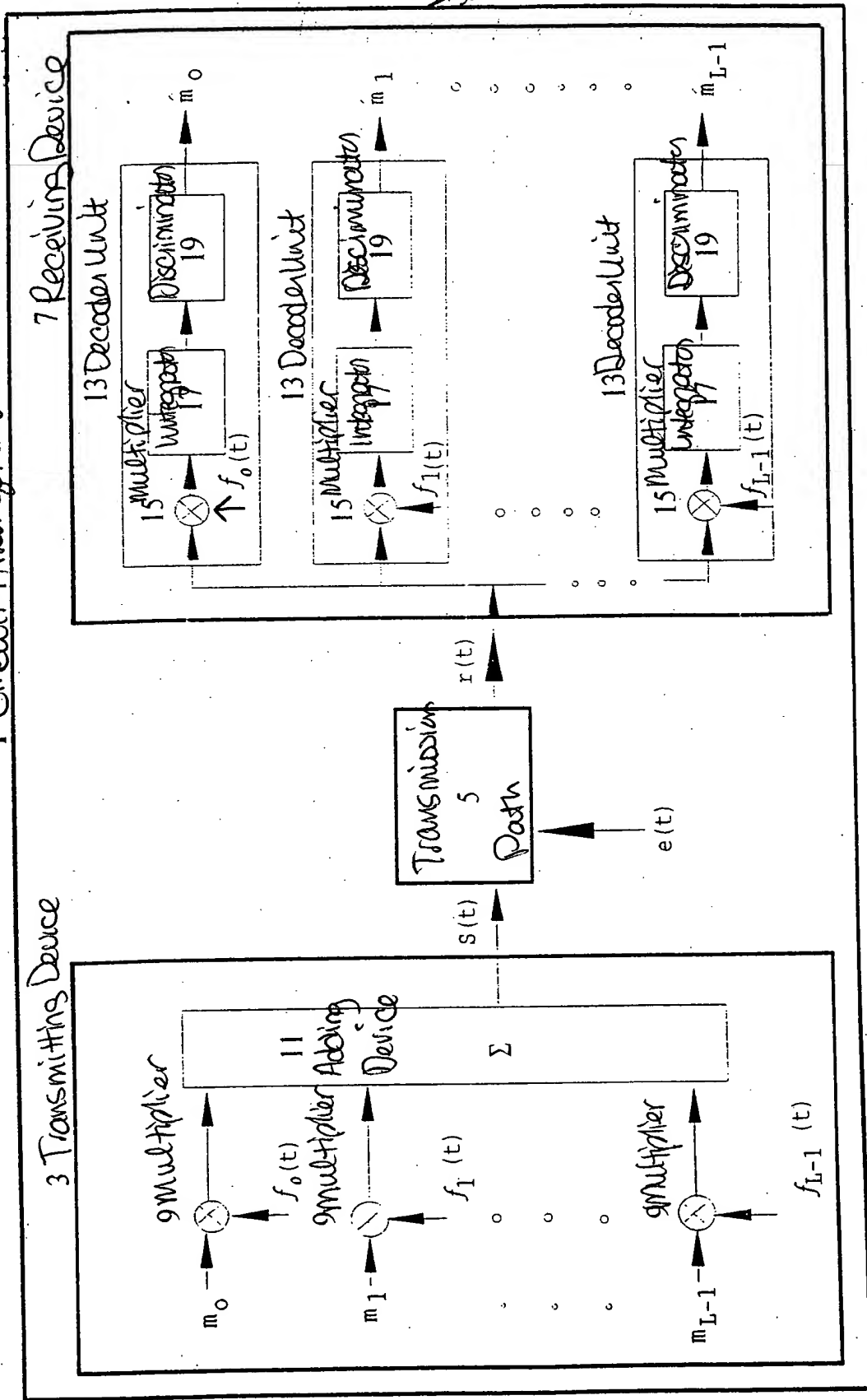


Fig. 1



[ANNOTATED]

7 Receiving Device

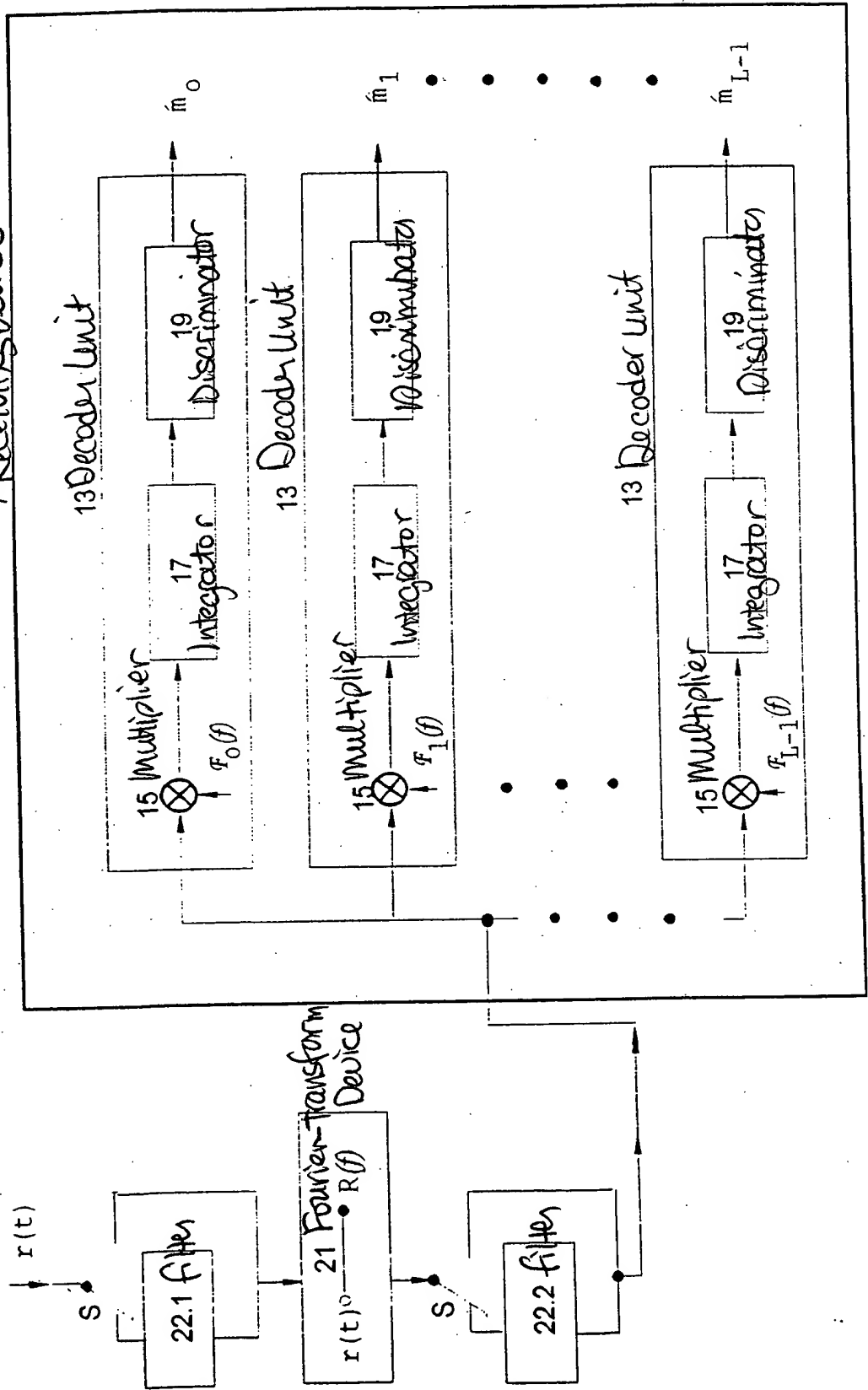


Fig. 2



[ANNOTATED]

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# 7 Receiving Device

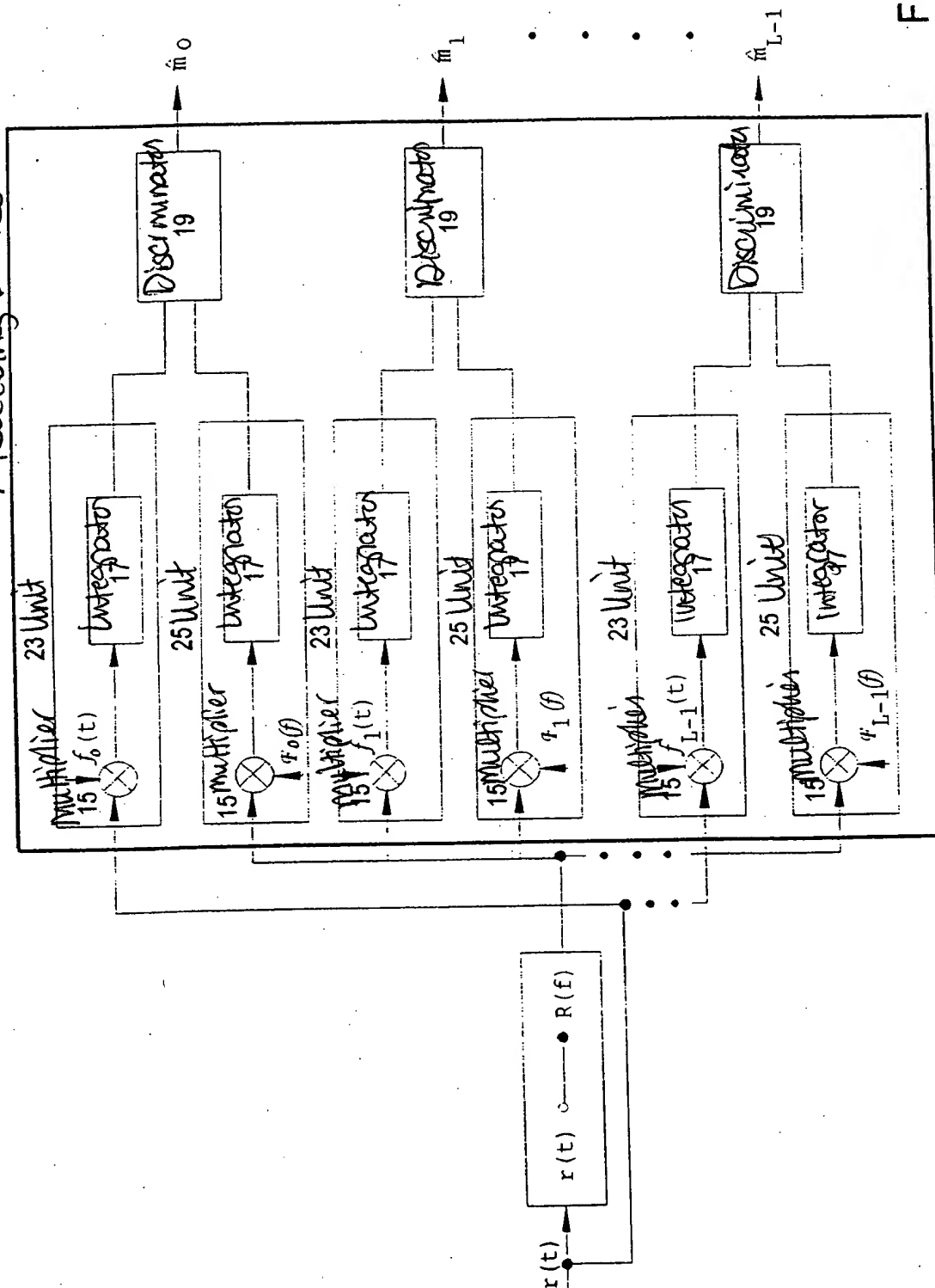


Fig.3

[ANNOTATED]

7 Receiving Device

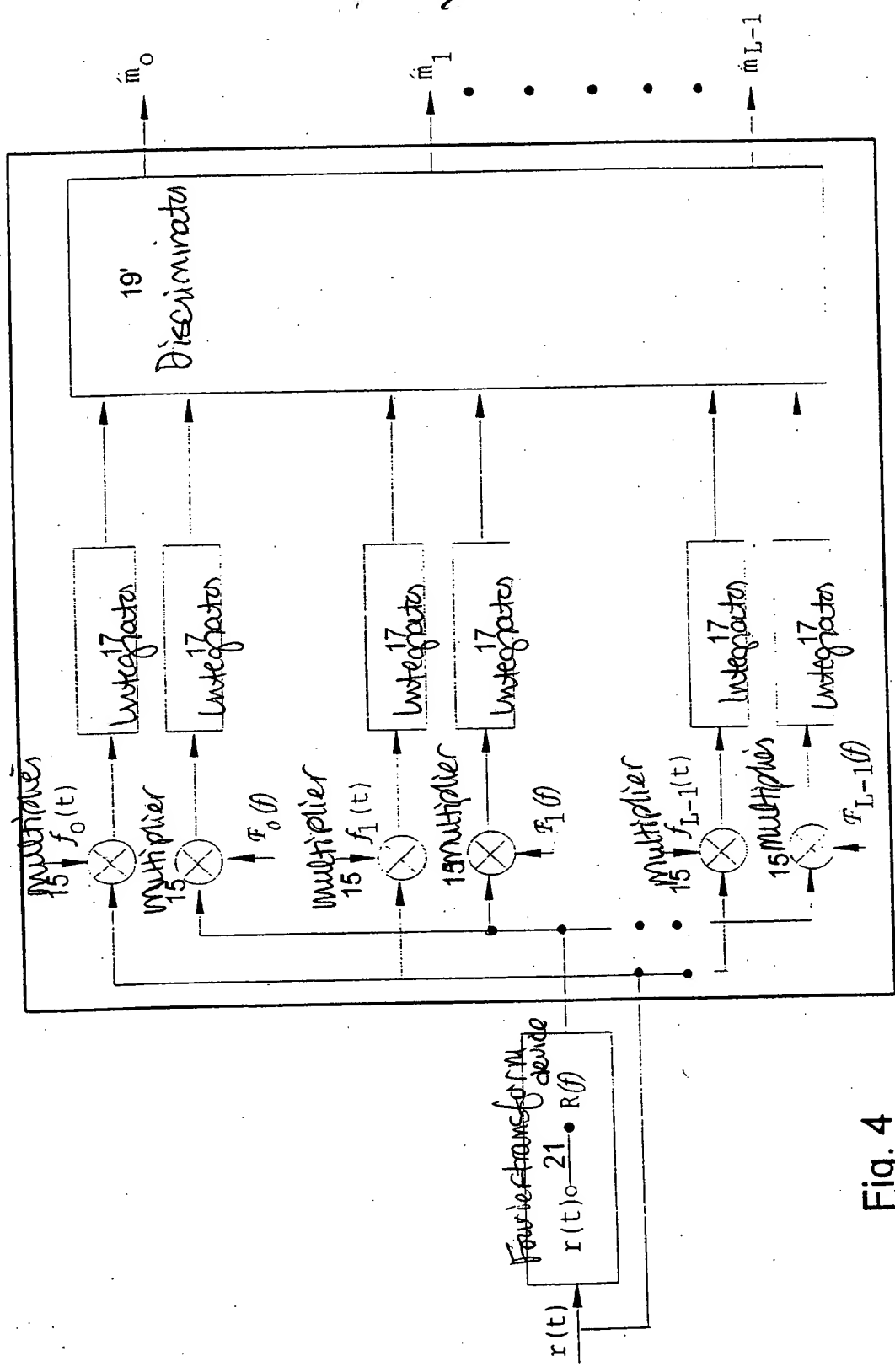


Fig. 4



[ANNOTATED]  
S/S

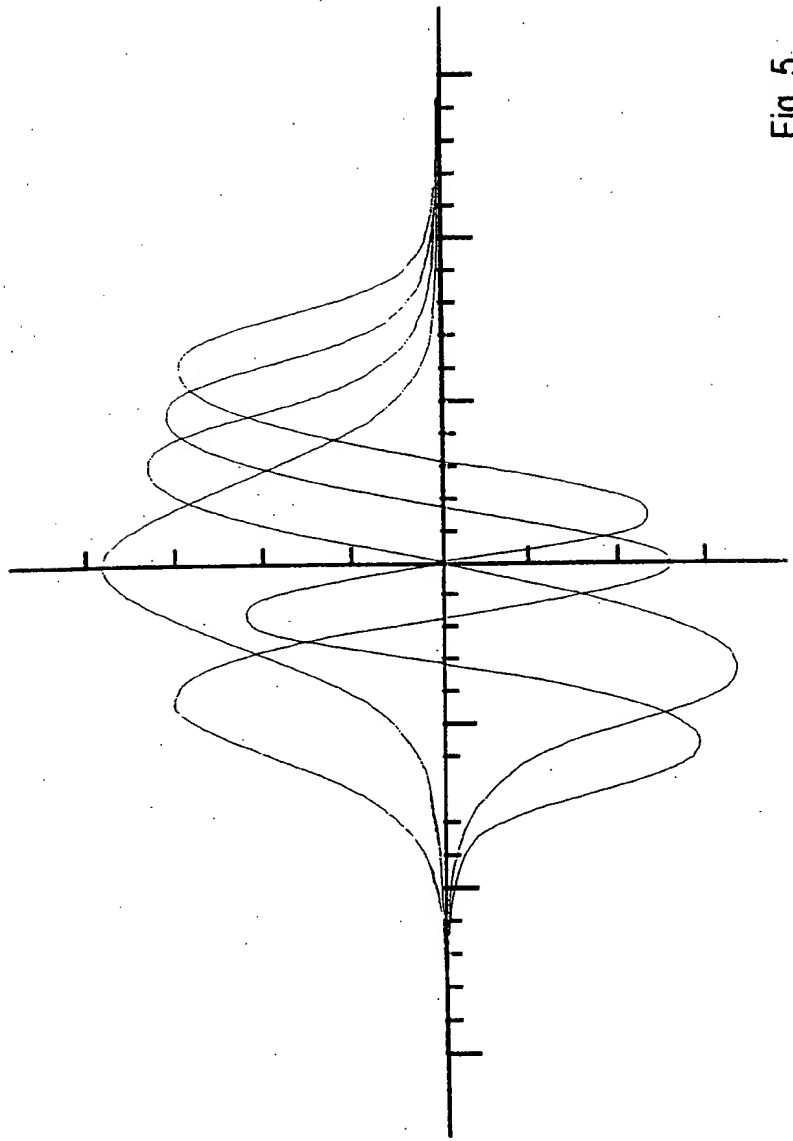


Fig. 5